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An improved method for estimating hippuric acid is described. "A Chemical and Bacteriological Study of Fresh Eggs," by M. E. Pennington. A series of comprehensive chemical analyses of whites and yolks of fresh eggs with the separation and study of the bacteria within them. Thirty-six species were isolated and identified. "Phlorhizin Glycocholia," by R. T. Woodyatt. Under the influence of phlorhizin, dextrose appears in the bile. "The Toxicity of Thallium Salts," by Robert E. Swain and W. G. Bateman. A study of the symptoms which are caused by thallium salts.

THE contents of *Terrestrial Magnetism and Atmospheric Electricity* for December, are as follows: "Exhibit of the Magnetic Work of the Carnegie Institution of Washington, December 13-18, 1909" (Frontispiece); "Some of the Problems of Ocean Magnetic Work," by L. A. Bauer; "Magnetic Storm of September 25, 1909, as Recorded at the Cheltenham Magnetic Observatory," by J. E. Burbank; "Letters to Editor"; "Biographical Sketch of Adolf Erman, 1806-1877"; "Portrait of Adolf Erman"; "Time and Direction at the Poles of the Earth," by W. J. Peters; "Notes"; "Abstracts and Reviews."

SUMMARIES OF SIX OPINIONS (9, 11, 13, 15, 17, 18) BY THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

THE following summaries of recent opinions by the International Commission on Zoological Nomenclature are published for the information of persons interested in the points in question. It is expected that the full details of the arguments will be published later in connection with certain other cases now under consideration. These summaries do not give the reservations made by certain commissioners, but these reservations will be presented in the final publication.

9. *The Use of the Name of a Composite Genus for a Component Part requiring a Name.*—The decision as to whether the name of a composite genus, when made up wholly of older genera, is tenable for a component part

requiring a name, depends upon a variety of circumstances. There are circumstances under which such name may be used, others under which it may not be used. (Art. 32.)

Vote: Affirmative, 12; negative, 0; not voting, 3.

11. *The Designation of Genotypes by Latreille, 1810.*—The "Table des genres avec l'indication de l'espèce qui leur sert de type," in Latreille's (1810) "Considérations générales," should be accepted as designation of types of the genera in question. (Art. 32.)

Affirmative, 11; negative, 1; not voting, 3.

13. *The Specific Name of the Sand Crab.*—Catesby's (1743) prelinnean name *arenarius* is not available under the code, although "reprinted" in 1771; *quadratus* 1793 is stated to be preoccupied; *albicans* 1802, being the next specific name in the list, becomes valid, under the premises submitted.

Affirmative, 10; negative, 0; not voting, 5.

15. *Craspedacusta sowerbii* Lankester, 1880, n. g., n. sp., vs. *Limnocodium victoria* Allman, 1880, n. g., n. sp.—*Craspedacusta sowerbii* Lankester, 1880, June 17, has clear priority over *Limnocodium victoria* Allman, 1880, June 24. Presentation of a paper before a scientific society does not constitute publication in the sense of the code. The commission is without authority to sanction usage in contravention to the provisions of the code.

Affirmative, 15; negative, 0.

17. *Shall the Genera of Weber, 1795, be Accepted?*—Weber's "Nomenclator entomologicus," 1795, complies with the requirements of Article 25, hence the genera in question are to be accepted, in so far as they individually comply with the conditions of the code.

Affirmative, 11; negative, 1; not voting, 3.

18. *The Type of Hydrus Schneider, 1799, 233.*—On the basis of the premises submitted by Dr. Stejneger, *Hydrus caspius* Schneider, syn. *Coluber hydrus* Pallas, is the type of Schneider's genus *Hydrus*, according to Article 30 (d). The fact that Schneider refers to the page and number of this species establishes the point in question and the fact that the name *Coluber hydrus* was not quoted is

perhaps unfortunate but not essential to decide the question at issue.

Affirmative, 13; negative, 0; not voting, 2.

C. W. STILES,

*Secretary of Commission*

#### THE MEXICAN COTTON BOLL WEEVIL

PROBABLY the control of no insect pest has involved greater difficulties than that of the cotton boll weevil. This enemy of a great staple crop works in such a manner that it has seemed beyond the usual means that have been followed in insect control. In all except the adult stage it is found within the fruit of the cotton plant. For the greater portion of its existence, therefore, it is at least as well protected as it would be if it occurred some distance below the surface of the soil. Even in the adult stage the insect has habits that tend to place it beyond the reach of man. As a consequence, investigations of the insect that have been carried on for several years have not revealed a great number of direct remedial measures. In fact, the destruction by burning of the left-over portion of the crop and the insects contained is the only direct means of importance that has been devised. It is gratifying to note that recent investigations by Mr. Wilmon Newell and Mr. G. D. Smith, of the Louisiana State Crop Pest Commission, published in Circular 33 of that commission, reveal another direct means of control that gives promise of general applicability. The work of Messrs. Newell and Smith is of considerable general interest, because it shows a successful outcome from continued investigation leading from a suggestion revealed in research. The investigators observed a clue pointing toward the possibility of control and directed all their energies toward the practical perfection of the idea.

For some years a cotton planter of considerable prominence has been advocating vigorously the use of paris green for the control of the boll weevil. Though well-meant, his campaign has been based upon a demonstrated fallacy. Extensive tests that have been made by various agencies have shown that the application of this poison is by no means a prac-

tical means of destroying the boll weevil. One of the agencies that tested the use of paris green was the Louisiana State Crop Pest Commission, of which Mr. Newell is the executive head. Although large and repeated applications did not result in increasing the yield of cotton in the experimental fields, it was evident, both in these tests and in cage experiments, that a number of weevils were killed. Instead of stopping at this point, Mr. Newell conceived the idea of determining wherein the paris green was ineffective and how its action might be increased. There were two important difficulties to overcome. In the first place, as paris green is now manufactured, a small portion of free arsenic causes burning of the foliage of plants. As the amount of the poison applied is increased, this damage, though insidious and at first scarcely noticed, becomes greater until it is very serious. On this account increasing the amount of paris green in the first experiments offered no hope as a practical remedy. The second obstacle encountered was the difficulty of forcing the poison into the portions of the plants where a considerable number of weevils would be likely to obtain it. The mechanical structure of the poisons in use prevented this. They were too coarse for effective work. To obviate the first difficulty, Mr. Newell determined to use arsenate of lead, which can be applied in very large amounts without any injury whatever to the foliage. The second difficulty was overcome by inducing a manufacturer to put up a special, finely powdered form of the poison. When this point was reached, a considerable series of field experiments was outlined. These experiments comprised about forty-six acres of cotton to which the poison was applied, as well as forty-nine acres provided as control areas. The treated cotton in these experiments produced an average of 71 per cent. more than similar cotton in the checks. In some cases the net profit was even startling. In one case a net profit of over \$23 per acre was obtained.

A large portion of the effectiveness of the application of powdered arsenate of lead in the experiments was undoubtedly due to the thoroughness with which the work was done.